

## CLAIMS

We claim:

1. A method of designing a system that includes a computer application hosted on a hosting environment, the method comprising:
  - (a) modeling the hosting environment such that the hosting environment model includes hosting environment settings and constraints placed on the application;
  - (b) modeling the application such that the application model includes application settings and constraints placed on the hosting environment; and
  - (c) validating the design of the system by comparing the hosting environment model to the application model.
2. The method of claim 1, wherein the constraints include configuration parameters.
3. The method of claim 1, wherein (c) comprises:  
analyzing application settings to determine whether the settings satisfy the hosting environment constraints.
4. The method of claim 1, wherein (c) comprises:  
analyzing hosting environment settings to determine whether the settings satisfy the application constraints.
5. The method of claim 1, wherein the hosting environment comprises a distributed computing system.
6. The method of claim 1, wherein the hosting environment comprises a plurality of server computers.

7. The method of claim 1, wherein the hosting environment comprises a logical computer workstation.

8. The method of claim 1, further including after (c):

(d) displaying on a display device a list of constraint conditions that are not satisfied.

9. The method of claim 8, further including:

(e) displaying a link in the list of constraint conditions that are not satisfied that links a condition in the list to a diagram that illustrates the condition.

10. The method of claim 1, further including after (c):

displaying on a display device an error icon when a constraint is not satisfied.

11. The method of claim 1, wherein (a) comprises creating a system definition model document.

12. The method of claim 1, wherein (b) comprises creating a system definition model document.

13. A design tool for validating application and hosting environment settings and constraints, the design tool comprising:

a module for setting application settings and identifying application constraints;

a module for setting hosting environment settings and identifying hosting environment constraints; and

a validation module that determines when at least some of the settings do not satisfy corresponding constraints.

14. The design tool of claim 13, wherein the validation module determines when application settings do not satisfy hosting environment constraints

15. The design tool of claim 13, wherein the validation module determines when hosting environment settings do not satisfy application constraints

16. The design tool of claim 13, wherein the hosting environment comprises a distributed computing system.

17. A method of identifying configuration errors for an application bound to a hosting environment, the method comprising:

- (a) displaying application elements in a first region of a user interface;
- (b) displaying hosting environment elements in a second region of the user interface;
- (c) in response to a command from a user moving elements from the first region to locations in the second region to bind application elements to hosting environment elements;
- (d) validating the design by analyzing application and hosting environment settings to determine whether the settings satisfy hosting environment and application constraints, respectively; and
- (e) displaying validation errors in a third region of the user interface.

18. At least one computer-readable medium containing computer-executable instructions for performing the steps comprising:

- (a) receiving application data that includes application settings and constraints placed on a hosting environment;
- (b) receiving hosting environment data that includes hosting environment settings and constraints placed on the application; and

- (c) validating a design of the system by comparing the settings to the constraints.